CHALLENGE DESCRPTION: FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS FOR EACH MOAI LABS CHALLENGE

Project Name:	**"MOAI LABS: Laboratories of collective intelligence and socio-health technology to combat the isolation and loneliness of the elderly"**
Acronym:	**MOAI LABS**
Schedule:	**INTERREG VB SUDOE**
Code:	SOE4/P1/E1078

1. CHALLENGE: CONNECT

The MOAI LABS project is looking for innovative solutions to help older adults who feel unwanted loneliness to make them feel less lonely or socially isolated, for example by increasing their meaningful social connections.

The expected solution should allow to connect with other people to socialize. Those people may be other older adults, but the solutions could also bring younger generations closer together. Family members, as well as other potential supporters such as volunteers, should also be targeted.

Innovative approaches must be leveraged to dynamize the community to facilitate participants' interaction. Dynamization could be based on topics of interest for the end-users like hobbies or personal experiences in order to encourage participation and build meaningful relationships among users.

The co-creation sessions have shown that older adults still prefer face-to-face contacts. Therefore, the developed solutions should result in an ICT -enabled community that is not only digital but also involve face-to-face activities. The solution could link to existing local activities organised by municipalities or other entities like associations, foundations, etc. and organise their own activities.

In addition to facilitating social contacts, the solution could provide support to teach older adults that feel lonely or socially isolated how to cope with loneliness in a healthy way through educational materials in an easy-to-digest format (e.g., videos, chatbots, or even video or phone sessions).

Objective: Digitally enabled community to support older adults in the fight against social isolation and loneliness.

Mandatory requirements:

1. Accessible, attractive and intuitive solution so that the user can incorporate it into daily life and make it part of their routine.
2. Simplicity and ease of use. The minimum usability of the solution must be basic, since the users it is aimed at may have low levels of digital literacy.
3. The solution must establish user profiles in the most individual and personalized way possible. The user may establish preferences that are stored with the user account and/or as cookies.
4. That it has an option which allows users to interact with each other, as well as explore approaches to bring similar people closer together (with similar interests, for example).
5. The main objective is to establish a community to share information and concerns, and to be able to connect with other people. The solution must include a space for users to share resources and needs.

6. Solution that has the option of visualizing the activities correlating them with the location and relative information of each activity. Taking into account the possibility of connecting the maps of the existing environment activities with the user profiles.
7. Allow for a facilitator/dynamic figure to provide content for the operation of the solution, streamline the tool and provide support to end users.
8. The solution will have to have updated information on activities and/or events
9. That the solution includes a personalized space for each user, where they can save information of interest, such as scheduling activities to be able to organize themselves.
10. Include activities to stimulate and improve users' digital literacy and mastery of technology, facilitating autonomy.
11. The solution must allow monitoring the use of the solution by the user, and thus be able to propose strategies in case the level of use is not adequate.
12. The technology must be efficient, reliable, robust, cyber-secure and GDPR compliant.
13. That the solution is compatible with the usual devices used by citizens: telephones, computers, televisions, tablets, smart watches, voice assistants, etc.
14. Available in several languages. At least in Spanish, French and Portuguese so that the Experienced Experts of the living labs are able to test it.

Additional requirements:

- That the solution offers the user the possibility of authorizing the sharing of information with relatives and/or trusted people.
- Involve the Public Administration.
- Add the warning option, with the configuration that they can be activated and deactivated according to the user's own preferences.
- That meets international standards of interoperability in health.
- Offer the possibility of connecting with other generations.
- To facilitate accessibility and usability, the solution offers various options for interacting: writing, video calling, and phone calling, among others.
- Training and/or assistant to make it easier for users to learn the tool.
- Include a gamification system. Creating incentives and digital stimuli to keep users active, for example rewards or recognition.
- Combine face-to-face and virtual activities.
- The system will include a psychological, emotional and psychosocial support function, with non-doctor-based digital services such as chatbots, video and written content, gamified user exercises and digital cognitive behavioral therapy (CBT) programs, allowing 24/7 access.

Expected impact:

- Loneliness is addressed through facilitating meaningful relationships between people.
- Increased social activity of the solution users measured through both digital and face-to-face interactions.
- High number of new relationships built among seniors and younger people thanks to the solution.
- Reduced perception of loneliness and isolation by the older adults.
- Improved management of emotional and psychological distress by older adults.
- Satisfaction and acceptance of the solution by the users

2. CHALLENGE: ACTIVATE

The MOAI LABS project is looking for innovative solutions to support older adults, even if socially isolated, to remain physically and mentally active with the aim to delay health status decline. The focus should be in a solution that:

- Promotes physical activity
- Promotes cognitive stimulation

The solution should lead to personalized plans according to the needs and preferences of the users. It should explore innovative approaches aimed especially at older adults, taking motivation and adherence into account, exploiting the potential of new techniques. Another fundamental aspect is the follow-up of the user's progress.

The co-creation sessions have shown that older adults still prefer human interaction. Therefore, the solution must be ICT-enabled but also human-interaction as much as possible.

Objective: Innovative solutions that help older adults stay healthy through physical and/or cognitive activities.

Mandatory requirements:

1. The solution must facilitate an evaluation of older adults to determine their physical and cognitive training needs, as well as assess their limitations, such as mobility problems, which will condition the type of activities that are proposed.
2. Based on the results of the evaluation, the solution must propose personalized physical and cognitive activities.
3. The solution must establish user profiles in the most individual and personalized way possible. The user may establish preferences that are stored with the user account and/or as cookies.
4. The solution has to be accessible, attractive, simple and easy to use. Taking into account that it must have different levels depending on the digital literacy of the users and their needs.

5. It must include the option to collect and provide feedback, in addition to reprogramming the user's preferences in an easy way.
6. The technology must be efficient, reliable, robust, cyber-secure and GDPR compliant.
7. A solution that includes gamification, both in cognitive and physical training activities, and that is motivating and stimulating for the user, encouraging adherence to cognitive and physical stimulation activities. Creating digital incentives and stimuli to keep users active, for example, rewards or recognition.
8. The solution must have the option to visualize the activities correlating them with the location and relative information of each activity. Taking into account the possibility of connecting the maps of the existing environment activities with the user profiles.
9. To facilitate the carrying out of activities, it must offer the possibility of doing them online.
10. Allow for a facilitator/dynamic figure to provide content for the operation of the solution, streamline the tool and provide support to end users.
11. The solution will have to have up-to-date information on activities and/or events.
12. The solution must allow monitoring the use of the solution by the user, and thus be able to propose strategies in case the level of use is not adequate.
13. Available in several languages. At least in Spanish, French and Portuguese so that the Experienced Experts of the living labs are able to test it.

Additional requirements:

- Possibility of offering online coaching sessions.
- That there may be a role of experts when developing the messages issued by the solution, in order to be able to communicate with the user with the most appropriate expressions.
- Incorporate cultural proposals, since they can also work as a stimulus.
- Establish channels of interaction between users such as chat, multiplayer games, etc., to stimulate integration and social interaction.
- Allow people to share their experiences and posts.
- Access to different resources of interest to users, such as a library, list of professionals, volunteer options, etc.
- Being able to carry out an individualized follow-up through an instrument that proposes a series of questions and with the answers can issue personalized messages.

Expected impact:

- The maintenance of cognitive abilities of older people.
- The prevention of a decline in the physical status.
- The establishment of preventative strategies favouring the both the physical and mental dimension of healthy ageing.
- The reduction of the negative impact of social isolation in health.